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AN ADDRESS

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By B. E. COTTING, M.D. Harv.

MY FIRST QUESTION

As a Medical Student,—

ITS SOLUTION A SURE BASIS FOR RATIONAL THERAPEUTICS.*

TWENTY years ago, on the unexpected failure of the appointed speaker, at the solicitation of the officers of this Society, I prepared the paper† which was read at the Annual Meeting. That service was performed in early acknowledgment of the duty incumbent on each member to contribute his allotted share for the advancement of the Society and our common profession. In continued recognition of the same duty I return to note a few of the changes in the interval, and to indicate, in one direction at least, the difficult task we must leave unfinished to our successors.

The Address of 1852 urged the necessity of solving *The First Question* I asked my teacher when, for the first time, I was taken as a medical student into the presence of a sick man;—*what will be the course and result of the disease if left to itself, without medicine?* This question my teacher, than whom never existed a more observant or conscientious practitioner, honestly and frankly confessed that he could not answer; such a case had never to his knowledge been left to itself. The reply rather surprised the young beginner; for then as now, it seemed a most befitting question to ask, and one that should be answered before any rational administration of drugs could be determined on. Elsewhere an answer was sought for, but in vain. The books did not give the desired information. All the cases they furnished had been submitted to remedial agents of real or supposed efficacy. The question appeared never to have been thought of; or, if thought of, not to have been deemed worthy of solution, or even of consideration. Nevertheless it seemed not an unreasonable question; and the resolution was tacitly formed to seek opportunities to solve it, so far as practicable, if only for myself. Some of the results of observations made for that purpose were cited in the paper read to this Society. It had been proved, even at that time, to my own satisfaction at least, that some of the gravest or most painful diseases, left without drugs, but otherwise properly cared for, will go on quite as favorably, and with as many recoveries, as when submitted to customary medication, and much better than when violently, or, as the word then was, *heroically* treated.

Although the Address did not contain any suggestion inconsistent with the firmest faith in the efficacy and usefulness of medicines when properly tested, or in the incalculable good to the sick to be derived from the attendance and care of the educated and scientific physician, yet human diseases had been treated so invariably with drugs, and every recovery had been so universally attributed, by the public and the profession, to the efficacy of the particular drug administered, that no sooner was the statement promulgated that unaided Nature* was adequate to the cure of diseases in a large proportion of cases, than there arose the cry of "heresy."

* "I prefer to be called a fool for asking the question, rather than to remain in ignorance."—Dr. JOHN HOMANS (while a medical student, 1860)—to an upbraiding Professor.

† Entitled NATURE IN DISEASE; published in the Boston Medical and Surgical Journal, October 13, 1852.

* NATURE, "with a capital N," by which is meant, not a "vague external secondary personification," nor a "metaphorical subcutaneous female entity," but the forces and laws of the Universe (to make the statement broad enough) so far as concerned in disease, its existence in the world, its inception in individuals, its progress, culmination, decline and departure (uninfluenced by human interference); and always presupposing an Originator, Law-giver, or, if any one prefers the term, "Great Artificer."

But this cry was also raised, about that time, in regard to some of the foremost men in the profession, who apparently were not very much deterred thereby from proclaiming their convictions to their associates.

New suggestions are seldom received at once without hesitation. Often, at first, they meet with much opposition, though destined, soon after it may be, to be fully accepted. Thus, five years later, in 1857, when Sir John Forbes (*"Nature and Art in the Cure of Disease"*) urged with great earnestness a zealous study of the Natural History of Diseases, averring that "on the profounder, more critical, and purer study of *Nature* as manifested *in Disease* rest, in my judgment, the best hopes of improvement in the Medical Art," he was constrained to admit that "the finding of a proper field for such observation and study is by no means so easy a task as might, at first sight, appear," and to declare it to be a lamentable defect that there was "no distinct chair for instruction in the Natural History of Disease" in any of the medical schools. Laboring hard to establish these positions, and feeling, he said, that they were at variance with those of most medical men, the best informed as well as ordinary practitioners, he showed that all along the ages there were numbers of cases so absurdly or so inertly treated that they must have recovered through Nature alone, though the credit of the recovery had uniformly been given to Art. And, on such inadequate cases as these, he was content, as it were in a spirit of compromise, to rest an elaborate plea for a mode of treatment of disease that might "occupy the happy medium between doing too little and doing too much,"—between, on the one hand, the fashion of mystified trifling then coming into vogue, and, on the other, the not less objectionable perturbative measures so often resorted to. On such unstable foundations, and without ascertaining for himself in a single instance what Nature of itself could do, he proposed a method of treatment which, after the manner of the times, he maintained in its result "must be accepted as superior to that which unassisted Nature can supply."

But for going only thus far he was violently assailed at home and abroad. The suggestion of a Chair of Natural History of Diseases seemed particularly obnoxious. An American Reviewer, who himself only the year before had laid it down, in italics, as a rule, that "*no active medicine should be used in any case, unless the evidence is clear that it will effect good*," thus strongly expresses his dissent:—"We do not believe that it is right for a physician to forego, in any case, the use of positive medication where it is clearly applicable, merely for the sake of seeing how the disease will proceed under the guidance of Nature alone"—overlooking his fatal proviso "clearly applicable," and evidently forgetting that he had then so recently declared that "there are comparatively few active medicines of real value;" and that "we need what Sydenham termed a Natural History of Diseases."

While Sir John Forbes throughout his volume thus endeavored to show the necessity of a knowledge of diseases without the interference or influence of medicines, and filled whole pages with the enumeration of the causes of the almost absolute ignorance on this subject, he seemed to give up, as almost hopeless, any expectation of a general effort to remove this ignorance, or to acquire the desired knowledge, in what he justly considered the only sure method; and his American Reviewer, apparently shuddering at the announcement of the idea of letting disease go on without medication of some sort, could not bring himself to allow the right even to make use of the only truly scientific test, although, while preparing the Review, he wrote to the author of the Address of 1852—"I have just been re-reading your Address. I am glad to find your views so consonant with mine, and I hope that the subject will continue to be pressed upon the attention of the profession by different writers, each in his own way, so that the good work of getting rid of over-dosing may go on."

Seldom can there be found better examples than these showing how difficult it is, even for those in authority and most self-relying, to rise above popular tenets, and to overcome the ever-pressing and probably unrecognized influence of what Forbes himself calls the "prejudices of education."

He who trumpets into notice a new agent, be it as lethiferous as chloroform or as inert as cundurango, may reasonably hope to be at once called "one of the lights of the age;" and he who impulsively lauds the virtues of any dangerous method or doubtful expedient may be quite sure of being proclaimed its "apostle;" but he who pleads for a little more caution, asks for a little more proof, points out danger, or exposes inefficiency, is liable to be looked upon with suspicion, or to be held in disfavor.

The suggestions advanced in 1852 had

proved no exception to the general rule. Though many journals and notices of the Address applauded its sentiments, not a few good and true men appeared to be troubled lest the confidence of practitioners in remedies should be disturbed – so that when the author was called upon, in 1865, to give the Annual Discourse before our State Society (the "Solemn Oration," as it is sometimes called), an Ex-President of this District Society, an esteemed friend, in the kindness of his heart, urged that its doctrines should accord with the prevalent opinions of the profession.* This kindly-intended advice was received in the same spirit it was proffered, but it aroused a train of thought which ultimately expanded into the discourse itself.

To the leading object of the Discourse *my first question* naturally followed as a corollary, and received additional force from the demonstration that preceded it. If diseases are a part of the plan of creation, then there must be a plan or law in each one of them, which should be sought out and understood before any attempt can rationally be made to influence its progress or results.

Seven years only have passed since the publication of the Discourse, and yet in this short time such changes have taken place in the opinions and writings of medical men, through many influences, that one would hardly presume to read the paper for the first time now, lest it might appear to some to be merely a compilation of commonplaces pirated from the very journals which in the first instance decried it. A series of quotations might easily be gathered up in illustration; but one, from the *Dublin Quarterly*, 1869, will suffice for an example;—"The law regarding them [epidemics] would seem to be as wide-spread as gravitation itself, and, no doubt of it, the Deity has, for his own purposes, ordained that it should be so; and I believe it will not end till time itself is no more."

An incident in point must be pardoned—one especially gratifying to the author—the recent unanticipated conversion of a life-long friend, who had formerly, very kindly and dispassionately, but rather adversely, criticized the leading doctrines of the Discourse. He has lately recorded his present opinion as follows:—"The doctrine that 'Disease is a part of the plan of Creation,' though at times assailed, has never been invalidated, and, better than any other statement, comprehends and explains the facts appertaining to human ailments."

The great and rapid changes alluded to in medical opinions must astonish our elder members, who, on finding where the advance has taken them, look back to their point of departure. They remember some of the first movements which opened the campaign; but they little thought then that they should live to see such a revolution—for what young men are now taught for true doctrine was considered scepticism less than forty years ago—the heresy of one generation becoming, as is often the case, the established faith of the next. "When, in 1835, the doctrine of self-limitation was announced," says the author of a Prize Essay on Rational Therapeutics, "it was quite common among men to speak of his Discourse [Dr. Bigelow's] as showing that he was unduly sceptical in relation to the powers of medicine. But at the present time, 1857, these views are those of the profession generally." Since then, too, there might perhaps be found admirers of Sir John Forbes's doctrine among those who once wished that he had been forced to retire from the profession years previously, so that such fallacies as his could never have been promulgated; and the author of the Discourse of 1865 now unexpectedly discovers his orthodoxy confirmed by one of last year's orators of the British Medical Association, in a passing allusion to "the *modern heresy* which *forbids* us to seek for design in morbid processes!"

Nevertheless, at this late day, in regard to the "succession of processes" which constitute a disease, the dispersion of the series, its jugulation, eradication, and, in failure of these, its subjugation, by "active" interference, are questions seemingly still open with too many practitioners, and to be incontestably decided *only after the solution* of *my first question*. Although the books and reports of cases are continually asserting, or leaving readers to infer, that such things have been done, or could be done if medical men were only called in season, still results when carefully brought to the test do not show sufficient grounds for such inference. It is noticeable that in the bulletins of the late illness of the Prince of Wales no such intimation appears; the medical attendants having apparently concerned themselves with what occurred from day to day, without anticipations or predictions. And it is further noticeable that the

* *Parvis componere magna*, "'I trust you will not cast doubts on the efficacy of medicine,' said a distinguished member of our profession, speaking to me of this Address."—Sir Wm. Jenner, M.D., &c. Address in Medicine before the British Medical Association, July 27th, 1869.

royal person suffered the same changes as the poorest subject is liable to, which would not have been, had skill or appliances been adequate to anything better. Even to such miserable sequelæ as are almost invariably attributed to neglect of some kind, did the case finally proceed. These, which will sometimes happen to the best cared-for, where alleged causes seem entirely inadequate or wholly wanting, raise in this instance a crowd of suggestions which should lead every practitioner to juster views of the limitations of his art.

The proclaimed, and perhaps prevailing, ideas of the treatment of acute rheumatism offer another illustration. The most opposite modes of active medication, general and local, have, from time to time, been announced and advocated, for shortening the disease; or more especially, of late, for preventing serious complications, of which "cardiac affections" seem to be most feared. But rheumatism is self-limited, and cardiac affections are a part of the disease; and, as such, may be the first in the series, or may even exist without any other portion of the body being involved. Cases of the kind have been reported to this Society —one in which the disease was diagnosticated from cardiac symptoms one or two days before any appearance in other parts; and one, where the disease was chiefly, if not wholly, confined to the heart, with only the slightest subsequent appearance, if any at all, in the extremities. Both cases recovered; in the second instance, the heart symptoms entirely disappeared a few years later as the patient grew to womanhood.

If *my first question* had been thought of, and an attempt made, whenever practicable, to answer it, for Asiatic cholera, on and since its appearance nearly half a century ago, the profession might have established, possibly by this time, some rational course to pursue, instead of being left to rush blindly, as much at a loss as ever, into all sorts of treatment; and we might have been saved the mortification of witnessing a recantation, at the last hour, of one of the most eminent and influential teachers, now recommending a course quite opposite to that which he has taught with "silver-tongued eloquence" for forty years past. If the plan now advocated by him is right, then countless patients have suffered at the hands of his numerous disciples up to this time. He virtually admits that he has hitherto been wrong; but seems not quite sure that the course now pursued is the true one —"its recommendation must, after all," he says. "lie in its comparative success." He does not tell us with what to compare it; an erroneous method of treatment, which had been discarded, would manifestly be an imperfect standard. The test we have suggested would be scouted perhaps by teacher and pupils; yet, think you that his patients would have suffered more, or run greater hazards, in its trial than under a, now avowed, wrong management? "I will not pretend to say," says the teacher, of the cases he himself treated, "that these persons might not have done quite as well if they had been left entirely to themselves." This, certainly, is the only answer that can yet be given; and, as, in this formidable disease, we still find no settled principles of treatment, a thorough knowledge of its Natural History would be as great a gain to future victims as to the profession.

How humiliating, also, the last public announcement, if true, of the last American collection of professional formulæ, said to contain all the most recent remedies of the most distinguished living American and European physicians and surgeons, that "these are in marked contrast with the obsolete and hackneyed formulæ to be found in the formularies now in the market." If such a wonderful contrast has been wrought so recently in the prescriptions of the eminent living practitioners, to what can it be attributed; for previous prescriptions were but yesterday considered of equal value and efficacy, though now termed obsolete and hackneyed? What evidence have we that the newly vaunted are better than the recently discarded formulæ? To what standard or test can such a question be brought in hope of a satisfactory solution? Is it unreasonable to require something real by which to fix that standard, when it can also be said of the last grand "System of Medicine" (Reynolds's) that "it contains none of the absurdities of works of twenty years ago," although it was then thought that the works and cyclopœdias of that time were so nearly perfect that, while possibly something might be added, there would never be need of much alteration or amendment?

All such pitiable oscillating from one extreme to another, with a current gratulation of superior success in each, till a prominent teacher is led to declare, in his lately published Lumlean Course, that "there are few conclusions more striking than the general one of the uncertainty of the art"—all this might have been prevented had the lesser risk been run of ascertaining, for a standard of comparison, what disease would of itself

do, before interfering attempts were made to modify it by perturbative agents, whose real influence for good or for evil cannot be irrefragably proved without such a standard.

This is said in no spirit of "Nature Worship" so freely denounced by writers, nor in "dismal want of appreciation of the true scope of Medical Art and Science"—but in the interests of both Nature and Art. We would hail with delight any "remedy," though discovered by a never so "audacious experiment," if fully proved to be beneficial to the sick—nor ask for the why and the wherefore, believing the reply of Molière's student, *quia est in eo*, to be the most philosophical attainable. But, awaiting this proof, we would have the true physician sometimes at least "a spectator" (until he understood the natural succession of the processes he desired "to meddle with," so far as possible, with their inherent tendency to good or evil results), in order that—and for that solely—he might *know*, not guess, whether "a disease is best let alone or treated by rest and diet," or "whether he can shorten its duration or abridge its sufferings" by any means within reach. This is what we would have him at times "a spectator" for, and it seems strange that, among a class of thinking men in this so-called enlightened age, any should still be found so fettered by the "prejudices of education" as to oppose unconditionally all such observations, since, "in proportion as the judgment is most cultivated there is the least yielding to the 'must-do-something' impulse,"* and the more especially while the present state of therapeutics continues to be confessedly unsatisfactory, or, as a writer in the *Practitioner* of only last year has it, "undeniably one of chaotic confusion."

A great change has indeed been effected, and a great advance has been made, yet these "prejudices" occasionally crop out in the journals we have quoted, and are now and then to be seen lingering in the addresses annually given to students by eminent teachers. One of these, last autumn, declared that he held "the doctrine [of leaving cases to Nature] to be as dangerous as the more ancient doctrine which allowed men to undertake cures in rashness and ignorance"—as though any scientific observations undertaken in the cause of truth, and in the interests of humanity, could be as dangerous as the rude experiments of "rashness and ignorance." The lecturer's lament, sorrowful as it seems to be, that there is a "school" in England inclined to such observations and entertaining the doctrine he inveighs against, is truly encouraging, and marks a great progress in breaking down conventionalisms and "prejudices." The doctrine is quite familiar in this vicinity; has ceased to shock our immediate neighbors; and has begun to be received by some at a distance. For an example of this among many, in an annual address given last year in an adjoining State, it is said "if a case is doubtful it is wiser and safer to let Nature manage it alone"; and, in regard to giving too much medicine or giving too little, "the latter is the safer of the two." In this there is no leaning to "rashness and ignorance."

It was the fashion within the memory of living men to call the spasmodic and tumultuous essays of "rashness and ignorance" by the popular phrase "heroic treatment"—but that day is past. He who withholds the *anceps remedium* is no longer to be called a sceptic, or a timid old woman. "Do not let me hear that called heroic treatment," said Dr. Wilks in a lecture at Guy's Hospital, 1866, "where much and powerful medicine is given. Such treatment is more often dictated by ignorance and cowardice. * * * I call that young man a hero, and his was heroic treatment to insist on a man lying in bed, eating nothing, and taking no medicine." But even this latter heroism, as a distinction through the doctrine involved in it, is also fast passing away. Physicians, who a dozen years ago would have shrunk from admitting the doctrine, now, consciously or unconsciously, advocate it, as though it never had been called in question; and the lamentations of opponents plaintively attest its spread throughout the profession, here and elsewhere. For a little while longer only, will it be thought necessary to becloud its trial by a specious appellation, as that of the "nutritive plan," or the "mint-water treatment;" as though nutrition must not always be an essential in any treatment, or mint-water could be considered an agent of power even by the most credulous.

The solution of *my first question* does not require an abandonment of any other line of inquiry, or method of investigation into the nature of disease, or the best mode of its management. On the contrary, every suggestion, from whatever source, promising improvement in the knowledge and treatment of disease is to be most heartily welcomed; only its real value to the sick man must ultimately be tested by reference

* Herbert Spencer. The Study of Sociology.

to this solution. Let every conceivable effort be zealously made to ascertain all the characteristics and medical properties of all known or discoverable substances, and to catalogue them in Dispensatories; let chemistry torture out their elements, and authoritatively designate the changes undergone in the system when they are taken into it; let physiology indicate, if it can, the exact tissue, or element, a given drug will ultimately find its way to and act upon, be it a nerve of the heart or blood corpuscle; let the action upon animals be sought out with diligence; furthermore, let the several effects of all proposed substances be carefully observed upon the human economy in health; and then, after that, in what Waring, one of the latest authorities, calls "the only sure way of ascertaining the true properties," in disease also; remembering, according to another high authority, "that whenever we give a man a dose of medicine we really perform an experiment," so little is as yet known of its real action—let all these several methods be followed out to the utmost in a truly scientific spirit, omitting none of the "refinements" of the day—and let no one of us underrate for a moment the brilliant results already derived from such sources—still *the one thing* will be lacking, if the Natural History of the course and events of undisturbed disease is not sufficiently known to be taken for a standard and a test.

The effect of a medicine on the system is one thing; the benefit to be derived from it, if any, may be another and quite a different thing. Sleep, for instance, is the frequent termination of a recoverable case of delirium tremens, and, as such, anxiously watched for by sympathizing attendants; but the sleep procured by opium, as used in that disease not many years ago, seldom ended the complaint, but sometimes apparently the sufferer. Delirium and wakefulness are often distressing accompaniments of typhoid fever, but the quiet and sleep produced by a hypnotic may prove more dangerous than the evils it is intended to remove. Perspiration is often considered a good sign in the course of a disease, but is it in reality more beneficial than the fever-paroxysm that preceded it? Philosophically speaking, are the last events of a disease any more curative than the earlier ones—each in its own order passing its allotted stages? Why need we so constantly act upon the supposition that disease, whatever our theory of its causation, is necessarily something added to, or else something taken from the system, seeing that such a supposition is gratuitous, that disease may be only (as Sir William Gull says) "a life-process of a perverted kind," and that we as yet know so little of the actual significance of external manifestations.*

"The Art of Medicine," says the Father of Medicine, "would not have been invented at first, nor would it have been the subject of investigation (for there would have been no need of it), if, when men are indisposed, the same food and other articles of regimen which they eat and drink when in good health were proper for them, and if no others were preferable to these. But now necessity made medicine to be sought out and discovered by men, since the same things when administered to the sick, which agreed with them in good health, neither did nor do agree with them." Such was the origin of the Art of Medicine; its crowning glory will be an *exact knowledge of the best management of the* SICK MAN, what food for his nourishment, what measures for his comfort and safety,—for the *sick man is the disease*, according to the last and highest dictum of the eminent attendants on the Prince of Wales; and *the science of the sick man* includes as an essential the answer still sought for to *my first question*.

This question of mine, thus asked in the verdancy of youth, has been ever-recurring through a somewhat extended and satisfactorily successful term of professional service. Some of the attempts at its solution have, from time to time, been laid before this Society. That there is a lurking hope that they have had some beneficial influence on the manner of viewing disease, and its treatment, here and elsewhere, I shall not be so disingenuous as to deny. To have pulled at the oar in the right direction is of some satisfaction, though the bark might have reached its destination, and gained the prize, without such assistance. This question, asked of myself, before prescribing, at the bedside of each patient in succession, has saved many a one from much of the perturbation inculcated in the books of past generations, and taught too incon-

* True enough in strict science; too true in the ordinary routine of the profession. "From a Report of the Hampstead Fever Hospital, it appears that at various times such large proportions of cases sent into the Hospital as 40 or 50 per cent.—indeed in one month 54 per cent.—were those of patients not really suffering from the diseases stated in the medical certificates under which they were admitted, and for which the Hospital was erected."

"Dr. Murchison, in his Report of the Fever Hospital at Islington, bears witness to the same facts."—*London Medical Times and Gazette*, Aug. 13th, 1870, p. 176.

siderately even now, at home and abroad, in the schools. That it has saved from disaster and death it may be presumptuous to assert; but it can be declared with confidence that it has never endangered a single life, nor added to the sufferings of a single individual. If students were generally to begin professional life in this way, their faith in real remedies would increase as they proceeded; and not, as in too many instances, end in complete distrust at last, after a "career made up of a series of failures and successes" in which they seemed to be only insignificant participants.

Moreover, the desired solution, if it could be satisfactorily obtained, would forever silence the plausible argument of adventurers and impostors, who, no matter how preposterous or nugatory their treatment may be, claim that because recoveries may have followed their treatment they themselves and their methods are worthy of confidence—for it would then appear, even to the common understanding, that such a supposition is untenable; but in the words of the "solid and accurate" Oesterlen, "so long as physicians appeal to nothing more certain in their practice * * * they must be content to let every one else, even charlatans, appeal to *their* experience; and * * * the sick will necessarily place the same confidence in, and award the same thanks to them, as to the most able physician."

As we have in part endeavored to show, a very great advance has been made within the last quarter of a century in the study of the Natural History of Diseases; and the scepticism in regard to perturbative treatment has already borne most promising fruit. Still the coming student will find the work only partially begun, with abundant necessity remaining for earnest observation and candid investigation. Happily, however, though but begun, progress is less difficult now that the way is opened and the direction pointed out. Incentives also are not wanting. "It is," says the *British Medical Journal*, editorial, Jan. 13, 1872, "It is in comprehending, noting, and defining this course [of disease] and its stages, and interpreting the precise degree and incidence of the inner development of the process, and measuring its effect, that the great triumph of modern medicine consists." Hence expectation is aroused; fulfilment should not be too long deferred.

"Since the publication of Sir John Forbes's book," says Dr. Johnson in his Address in Medicine before the British Medical Association in August last, "and partly, no doubt, in consequence of that publication, our views as to disease and its treatment have undergone a very great change. A purely expectant treatment is now as common as then it was rare. It is now fashionable and orthodox to trust to the curative powers of Nature, and to doubt the therapeutic power of Art. The pendulum has swung from one extreme to the other." To the young men of the profession this announcement from an influential observer offers unusual assurances. The obstacles in the way of their fathers-in-medicine need no longer to greatly impede their progress. Let them avail themselves of present opportunities while they can. "Life is short, opportunity fleeting," said the great Master; pendulums do not tarry long in an extreme. While it is "fashionable and orthodox," since every one instinctively conforms in some degree to the tendencies of his time, let them strive unceasingly to solve for themselves and others, *my first question*,—that they may have in the solution a surer basis for their faith in their Art, and thus become better guides to the sick than their predecessors.

As for the still often-expressed fear that individual success would be ruined, and the profession reduced to a nullity, should such investigations become general, nothing can be more groundless.

In all ages, and in all countries, the most successful, the most confided in, and ultimately the most honored, have been those, who, with no obnoxious pretensions to personal superiority, have been guided more thoroughly than others by Nature itself in their care of the sick. Of the truth of this, the late recipients of royal favor and a nation's gratitude, in old opinionated father-land, are notable examples. Personal success depends upon far other qualifications than ability to deal out nostrums and specifics. To be eminently successful, say our teachers, and their words are worthy of all acceptation, requires, in addition to adequate learning and science,—the kindness of heart-and-manner of a gentleman, to put one spontaneously in the place of the sufferer, however humble, that he may be done for as one would wish in like circumstances to be done by,—balance of character,—steadiness of purpose,—uncomplaining patience,—self-denial,—rectitude,—sagacity,—sympathy, with firmness capable of assuming the expression of inflexible sternness,—a certain amount of personal experience and responsibility conjoined with the talent for comprehending and applying

its results.* These, according to our teachers, are some of the requisites for personal success. Whoever has these need not fear a loss of occupation. That there are such in our Society, such in the State, such in all countries, admits no shadow of doubt; and they are they who, in the exigencies of individuals and of the State, will be sought out and chiefly depended upon.

The Medical Profession is essential to every community; henceforth no civilized people can possibly do without it. Were any or all of the drugs in popular repute proved to be useless; were it even found that there is no particular medicinal agent essential to the best treatment of disease, of which, however, there is not the slightest apprehension, the value of the profession, as such, would not be diminished, nor would it become, as one reviewer has coarsely expressed it, "just about good for nothing." It has, as we have before and frequently intimated, higher and nobler purposes. Never in the memory of the oldest was less medicine given than at the present day, and never was the profession, the truly regular and scientific portion of it, held in higher regard by the people. Said a commoner within hearing a day or two ago, "there is a great deal of *real respect* for educated physicians everywhere. After all, they are the best and most substantial men we have. In country towns they are invaluable."

The profession which has members with the qualifications and influence we have described may well endure the insolence of scoffers, the gibes of the thoughtless, and the fears of pusillanimous friends, for, akin to sacred teaching, no human employment confers a greater good upon the race, or is in fact more truly valued by mankind. It is deeply grounded in the necessities of human nature, and cannot be undermined; but its usefulness will be vastly increased, and placed on firmest foundations, and it will be held in still higher estimation when it shall have added to its already great and varied acquisitions a full solution to *my first question.*

Honors Declined.—Profs. Billroth and Brücke, of Vienna, have been offered chairs in the University of Strasbourg. They have, however, decided on remaining in Vienna.

* This last clause is from Sir Henry Holland's *Recollections of Past Life.* The other "requirements" are from various sources not needing special acknowledgment.

A CASE OF SCALPING.

By Theo. F. Breck, M.D., Springfield.

August 15th, 1871. Miss E. W., aged 21, an employé of a Springfield manufacturing company, while reaching to take something from a shelf above her head, caught the net covering her hair, and her hair also, on a revolving shaft two inches in diameter, which was making 128 revolutions per minute. Her entire scalp was torn off, with the subjacent muscular and other tissues, down to the pericranium, from the fifth cervical vertebra posteriorly, to the bridge of the nose anteriorly, and laterally from ear to ear, including the skin of both eyelids and a piece of skin two inches square from the left cheek.

I reached the factory some thirty minutes after the accident, and found the patient sitting on the floor, with her hands clasped round her knees, and apparently very calm and collected. There was very little hæmorrhage; her pulse was 80, about normal, and her respiration regular and not rapid. She was immediately removed to her home, and the wound dressed with a weak solution of carbolic acid. No attempt was made to replace the scalp, as it was torn into shapeless fragments.

During the next twenty-four hours she was given milk and stimulants freely, and morphiæ sulph. gr. $\frac{1}{8}$ every three hours.

Aug. 16th.—Patient very comfortable; complains of no pain. Pulse 80, full and regular. Treatment continued.

Aug. 17th.—There has been considerable hæmorrhage the past twelve hours, which, upon removing the dressings, was found to come from the supra-orbital artery. It was checked by pressure and the application of ferri persulph. Patient somewhat excited. Pulse 110.

Aug. 18th.—Passed a comfortable night, and is much refreshed. Pulse 105, strong.

Aug. 19th.—Upon removing the dressings, suppuration was found to have begun, and the wound was dressed with ungt. creasoti. Bowels freely moved by enema. Opiate discontinued. During the next two weeks the patient's condition steadily improved. She then had severe inflammation of the left eye, resulting in its destruction. The origin of this trouble was a fragment of a lead pencil which she had behind her ear at the time of the accident.

It is now nine months since the accident, and the process of restoration has been very slow. At times the skin forms very rapidly, then what has already formed will

slough off, leaving the whole wound an ulcerating surface.

Various applications have been made, but with little benefit. The patient's health is excellent, she being able to go about and attend to the various duties of life. The question is, will skin ever form over the entire surface of the wound?

About the time of this accident, several cases very similar occurred; one in particular, at the Elgin (Ill.) watch factory. I should judge, from the description which I received from the attending surgeon, that it was identical with the present case. There the scalp was replaced, but with no success, as it sloughed off on the fourth or fifth day.

I have advised the patient to submit to Reverdin's operations of skin transplantation, but she is very unwilling to allow any surgical interference.

Reports of Medical Societies.

BOSTON SOCIETY OF MEDICAL SCIENCES.
EDWARD WIGGLESWORTH, JR., M.D., SECRETARY.

MARCH 26th, 1872.—The Society met at the house of Dr. Warren. Dr. Richardson in the chair.

Temperature-regulator for Water Baths.—Dr. Bowditch showed an instrument for regulating the temperature of water baths in chemical experiments. The apparatus consists of an oval glass bulb hermetically sealed round the end of a glass tube. Both bulb and tube contain mercury. The apparatus being placed in a water bath the temperature of which it is desired to regulate, the heat causes the mercury to rise in the bulb and close the lower end of a smaller tube which can be adjusted at any desired height inside the larger one. Through this smaller tube the gas is conducted to the burner which warms the water bath. The closure of the lower end causes, therefore, a diminution of the flame and a consequent lowering of the temperature. As the temperature falls, the mercury sinks in the larger tube, the lower end of the smaller tube is again opened and the supply of gas is increased. The instrument is thus self-regulating. By adjusting the small tube at different heights within the larger one, the temperature of the water bath may be kept constant, within 1° C. at any desired height for an indefinite length of time. Various instruments to accomplish the same end and involving essentially the same principles have been constructed and used at different times, but the present one is considered to be quite as accurate and much more simple than any heretofore constructed.

Test for Arsenic in Wall Papers.—Dr. White then showed specimens of dark green, emerald green and pale green wall papers, the latter two containing arsenic, the last diluted in its color. He spoke of various tests, perhaps the best being the addition of one drop of ammonia to a piece of the paper laid in a cup, to dissolve out the color, and the subsequent addition of nitrate of silver which then causes a yellow precipitate of arsenite of silver. It should be borne in mind that arsenite of silver is soluble in an excess of ammonia. The common idea is that any change of color on the addition of ammonia proves the presence of arsenic. The fact is that the pale green paper shows a faint blue color, but the others only after standing for a while and when examined side by side with white paper, &c. In the dark green papers, arsenic is not present as the rule. A chrome green printed over the lighter arsenical greens gives a comparatively innocuous paper. So also glazing or sizing.

In reply to Dr. Richardson, Dr. White said that rough papers gave off the arsenic more readily than smooth.

In reply to Dr. Warren, Dr. White stated that the older the paper the more readily is the arsenic detached.

Reagents for Causing Transparency in Microscopical Specimens.—Dr. Webber spoke of the merits of oil of cloves in the preparation of microscopical specimens. It is not so volatile as oil of turpentine, and preparations may be kept in it for examination for a day or two. If carbolic acid is used, the preparations must be washed with chloroform before Canada balsam is used; whereas with oil of cloves, Canada balsam can be used at once and the preparations do not harden so soon.

Dr. White asked if vibrios were found when oil of cloves was employed.

Dr. Webber had not tried to find these.

In reply to Dr. Bowditch, Dr. Webber said his preparations had been from the brain and spinal cord and the fibrous tissue cleared up quickly in oil of cloves.

Dr. Edes stated that copal varnish could be used at once after carbolic acid.

Dr. White remarked that after a year or two his specimens prepared with Canada balsam had run after having been left on their sides.

Dr. Fitz said his specimens prepared with Canada balsam and glycerine cracked after a time.

Dr. Edes mentioned that copal varnish had been recommended by Dr. Dean for sections of the spinal cord, since it was more easily prepared than to dissolve Canada balsam in chloroform.

Dr. Warren considered that the balsam thus prepared was apt to soften. He had found a very durable article could be obtained by liquefying the balsam by means of heat, avoiding air bubbles.

Dr. Edes thought this would depend on the condition of the balsam before solution; if this were hard, then it would also be hard after evaporation.

Dr. Wadsworth had found that Canada balsam when used with oil of cloves tended to shrink for months or a year. Oil of cloves was also objectionable as producing a tinting of the specimens.

Dr. Warren added that it caused at times a too excessive transparency.

Rhythmical Activity of the Vaso-motor Nerves.—Dr. Bowditch then spoke of the rhythmical activity of the vaso-motor nerves. Under the influence of these, the small arteries of the body are kept in a state of tonic contraction, affording thus a certain obstacle to the passage of the blood. Increased activity of these nerves is indicated by a rise in blood pressure as measured by a manometer in one of the large arteries. If a float carrying a pen is placed upon the mercury of the manometer, the variations of the blood pressure may be recorded on a revolving cylinder covered with paper. When thus recorded, the blood pressure is found frequently to undergo periodical variations, indicated by a waving line drawn upon the cylinder. These variations are caused by more or less rhythmical contractions of the small arteries under the influence of the vaso-motor nerves. The accumulation of carbonic acid in the blood, as in asphyxia, increases these variations, in consequence, as is supposed, of an irritation thus produced of the vaso-motor centres in the medulla oblongata.

Whether these rhythmical contractions of the vessels are peristaltic in their nature is a disputed point. There are many reasons, however, for thinking that this is the case, and some authorities explain in this way the fact that the arteries are always found empty after death, the blood remaining in the system, after the heart stops beating, being all driven to the venous side by the peristaltic movements of the vessels.

The tracing exhibited was obtained from a rabbit which had been curarized and kept alive by artificial respiration. The quicksilver manometer was in connection with the carotid artery. Just before taking the tracing, the animal had been partially asphyxiated by suspending, for a time, the artificial respiration. The amount of variation of pressure as shown in the tracing is about 12 mm. of quicksilver, and the period is from 5–7 seconds.

Dr. Edes asked if the same condition of things obtained in other animals as well as in rabbits, which latter show it also so plainly in their ears.

Dr. Bowditch said yes, in dogs for instance.

Dr. Warren showed a specimen of *syphilitic blood* under the microscope.

Dr. White said that experiments in New York recently had shown more Lostorfer-corpuscles in normal than in syphilitic blood.

Dr. Warren added that sarcinæ had been found after the blood had been drawn a certain length of time.

Dr. Warren stated that Wedl declared the little glistening bodies to be drops of fat from the sebaceous glands, that these were concealed at first by the crowded blood-globules, but became apparent if a stream of water was passed through the preparation; that the vacuoles, moreover, resulted from decomposition.

Dr. Fitz said he had been more successful in finding the bodies mentioned by Lostorfer near the edge of the covering-glass, where the blood-globules were less crowded.

Dr. Warren concurred in this, and said it was best to take but a small drop of blood.

Dr. Fitz added that coagulation of fibrin and setting took place at the edges and the corpuscles were seen moving about in various currents.

Dr. White remarked with regard to Neumann's opposition to Lostorfer's theory, that Neumann had begun by accepting the views of Hallier, and as the result of his own investigations had come gradually to disbelieve his own previous views. His testimony was therefore more valuable than that of a new man like Lostorfer.

Professor Lewis A. Sayre, M.D., of this city, has been made a Knight of the Royal Order of the Wasa by the King of Sweden, in consideration of his services to surgery in that country.—*The Med. Record.*

Bibliographical Notices.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales for 1870 *and* 1871. Par P. Garnier, Médicin, &c. &c. Paris, January, 1872: G. Baillière. 12mo. Pp. 684.

This Dictionary, noticed heretofore more than once by this Journal, is again at hand. Its introduction contains a good *résumé* of its contents, and gives also the plan which its author has had in mind in its compilation.

To quote from the Preface:—"In accordance with the want everywhere more and more felt of keeping one's-self well acquainted with the progress of human science, we believe this volume will be as heartily welcomed as the previous ones have been. The journal passes quickly by, disappears, and is with difficulty consulted when wanted. The book, on the contrary, lives; and with the alphabetical order adopted in this Dictionary, nothing is more easy than to find what has been newly said or done regarding any subject sought for. Every year brings to light new annuals. In addition to the English reports of Dr. Dobell are the Italian Annual of Dr. Schivardi, and the German Jahrbücher edited by Prof. Stricker; but no other besides this attempts a completeness of medical science in all its branches, wherever real and practical progress is to be found, whether in book, brochure, memoir, article or note. In this respect we believe this superior to all others for the medical practitioner."

The author, at the beginning of his introduction, explains the non-appearance of the Dictionary for 1870. The sad Franco-German war, the prolonged siege of Paris, and the consequent interdiction of all communication with the external world, caused both a failure of medical news and of the means of publication. Naturally, the writer can speak only in the most bitter terms of the Germans, and is not inclined to give them the praise that is their due for their devotion to medical science. He remarks:—"The rupture of relations with the new German Empire has suspended all communications from that source, but the experimental and speculative character of almost all the works which emanate therefrom, causes us scarcely to regret their omission, and our readers have sustained no great loss."

The volume contains reports of the learned discussions of the Academy of Medicine and other Medical Societies of Paris upon Alcoholism, Maternities, Vaccinia and Variola, Arsenic and Pufulent Infection. In the discussion of the last-mentioned subject are brought out the late German theories upon Septicæmia, and a new cause, osteo-myelitis, pointed out by Messrs. Gosselin and Demarquay, and which the blood-making action of the medulla of bone tends to confirm. It is stated that the German theory of the formation of pus, that it is wholly a mechanical process, hardly stands the test of criticism.

Attention is called to the article on Hemiplegia, to two excellent monographs on Abortive Typhoid Fever, and to what is denominated *La Myosite Ossifiante Progressive*—a disease as yet but little known to most physicians.

In surgery there are important statistics upon amputations. A reference to the article shows them to be largely derived from American sources. Notice is also taken of numerous successes in reduction of dislocations by what is called the method of continuity, in which the continued traction of elastic bands is employed. There are articles upon Epidermic Grafting, on Ovariotomy, on the employment of Gastrotomy for the removal of adherent and interstitial tumors of the uterus. Mention is made of the proposal of Prof. Thomas, of New York, to employ the same operation for irreducible inversion of the uterus.

But especially in therapeutics, says our author, one finds complete accounts of the advantages and dangers of the employment of three medicines which are much in vogue, viz., carbolic acid, chloral and bromide of potassium. The benefits of the first of these articles have been exaggerated, and proofs of the danger of producing gangrene have been brought forward. M. Tillaux has recently observed well-marked gangrene to be induced in the case of three wounded men from an injurious application of the acid. Sixteen pages are devoted to a monograph regarding Chloral, besides a very considerable space allotted to it in the articles upon Insanity, Cancer, Chorea, Whooping Cough, &c. It is in epilepsy that the third remedy has received its principal application, but not always, as has been supposed, without injury.

The study of the antagonism of poisons, pursued for some years past, has succeeded in establishing some new points—especially the antagonism of chloral and strychnine.

Such are a few of the points regarding the plan and the contents of the Dictionary.

In conclusion, we cannot but express our conviction that the book has much that is of scientific and practical value to the physician. F. W. G.

Pulmonary Consumption: its Nature, Varieties and Treatment. With an Analysis of one thousand Cases to Exemplify its Duration. By C. J. B. Williams, M.D., F.R.S., &c., and Charles Theodore Williams, M.A., M.D. Oxon., &c. Philadelphia: Henry C. Lea. 1872. Pp. 315.

Dr. C J. B. Williams, to whom is due the origin of the book now before us, is best known in this country from the "Principles of Medicine," published some years ago, at a time when the author was Professor of Clinical Medicine in University College. His opportunities for the observation of pulmonary consumption have been numerous, and, aided by the valuable assistance of his son, he has at last given to the medical profession the long-promised volume. In bringing forward his views, a careful selection and analysis of cases under observation for a long time seem to have been made, and the clinical aspects of phthisis have received very thorough treatment at his hands. Dr. C. T. Williams has devoted much thought and labor to the drawing up of statistical tables, which present many interesting features, to be regarded almost in the light of well-substantiated facts.

The father pays the following compliment to the son: "His assistance in this department has been the more saisfactory to me, because I have neither taste nor talent for that kind of work, which is nevertheless indispensable where precision and accuracy are required." Very valuable information is also obtained in certain instances from the class of patients whose histories have been made use of.

The experience of most clinical teachers, as presented in print, at least, is, as a rule, largely, if not almost entirely drawn from hospital cases. We find in this book, however, an analysis of one thousand cases selected from the middle and upper classes, well-to-do people, accustomed to all the benefits, as well as to all the disadvantages of living under so-called favorable conditions.

In considering hereditary influence, the duration of the disease, the remedial effect of change of climate, &c., such cases are of extreme value.

The remarks upon treatment are deserving of a careful consideration, based as they are upon an experience of forty years, during which time a confidence seems to have been acquired which must prove very satisfactory to the possessor. We infer that Dr. C. T. Williams writes with his father's authority when he states with regard to night-sweats that "there is no lack of agents, of which one or the other is pretty sure to answer the purpose;" and "the medicine we have found to act as a specific on night-sweats is the oxide of zinc, in doses of two or three grains, in the form of a pill at night." How closely will the experience of the American physician coincide with this statement?

The book is one well worth possessing, is more than readable, and will serve as a handbook for one desirous of information with regard to the clinical features of a disease which so uniformly runs on from bad to worse.

An Investigation concerning the Mechanism of the Ossicles of Hearing and the Membrane of the Round Window. By Charles H. Burnett, M.D.

In the forthcoming number of the *Archives of Ophthalmology and Otology*, Dr. Charles H. Burnett presents a very interesting series of investigations on the mechanism of the ossicula and of the membrane of the fenestra rotunda. These investigations are made with especial reference to the movement of the ossicles and of the fluid within the labyrinth in response to the sonorous vibrations conveyed to the membrana tympani upon fresh temporal bones taken from both sexes between the ages of 6 and 45 years. In preparing the specimens for observation, the floor of the tympanum was cut away as high as the fenestra rotunda, till it and the promontorium were fully exposed.

The preparation was then firmly fastened in a vise in such position as to be readily approached by a microscope and easily illuminated, and so as to expose the ossicles from below and the membrane of the fenestra rotunda at an angle of about 45°. As sources of sound, four organ pipes respectively of 50, 140, 630, and 1160 v.s. were employed, the sound being conveyed to the meatus by a flexible tube.

Upon producing a note upon the pipe thus connected with the ear, the ossicula were seen to vibrate in excursions bearing a fixed relation to each other, at the same time their motion was communicated through the labyrinthine fluid to the membrane of the fenestra rotunda, the excursions of which maintained an almost constant rela-

tion of equality with those of the stapes. The excursions of both the ossicula and the membrane varied with the pitch of the pipes, the longer excursions corresponding to deeper tones. The results of the measurements of the excursions of the ossicula and membrane as given in Dr. Burnett's concluding tables are worth a careful study, especially where the observations were made under an artificially produced intra-labyrinthine pressure. One preparation, which in the natural condition did not respond at all to the vibrations of a pipe the note of which gave 630 v.s. under a pressure upon the labyrinth of $\frac{1}{60}$ atmosphere, gave excursions of the following lengths: At point of long process of malleus, 0.008 mm.; at point of long process of incus also 0.008 mm: at the head of the stapes 0.004 mm., and at a pressure of $\frac{1}{30}$ atmosphere, one-half of the above.

In one preparation, in the natural condition tested by a note of 140 v.s., the length of the excursions of the membrane of the fenestra rotunda equalled that of the malleus.

From his observations, Dr. Burnett makes the following deductions:—

1. The excursions of the ossicula bear a fixed relation to each other.

2. The excursions of the ossicula are communicated through the labyrinthine fluid to the membrane of the fenestra rotunda.

3. The excursion of this membrane generally equals that of the stapes, but it may equal that of the membrana tympani.

4. The pressure within the labyrinth increased beyond a certain limit causes cessation of action of ossicula and membrane of fenestra rotunda; this occurs sooner in connection with high than with low notes.

5. If the intra-labyrinthine pressure be removed or greatly diminished, the ossicula may continue to vibrate but exert no influence upon the membrane of the fenestra rotunda. C. J. B.

Medical and Surgical Journal.

Boston: Thursday, July 4, 1872.

A SYSTEM OF RATIONAL THERAPEUTICS.

The Address of Dr. Cotting, with which we initiate the eighty-seventh volume of the Journal, will arrest the thoughtful attention of all who peruse it; and we need hardly commend it to the special attention of our readers. However much it may excite criticism with regard to the methods which it suggests, the discourse will be universally recognized as an earnest and conscientious endeavor to arrive at something better in therapeutics than the profession has hitherto been able to attain; to develope a system in the treatment of disease which shall be founded on something more rational than tradition or empiricism.

How fully the attempt to provide radical improvements in therapeutic methods is accomplished in this Address, each reader will judge for himself. Upon one point, however, all must agree, namely, that greater attention on the part of physicians to the natural history of disease is imperative, before much agreement in the application of drugs can be reached. Physiological study alone can do but little; pathology is as yet unable to accomplish much; clinical observation is the chief avenue by which we may arrive at some sort of systematic principles to guide our treatment of disease. In this direction much has already been done, and the perturbative therapeutics of our own day is in striking contrast with the heroic perturbativeness of past generations. But much still remains that is unsatisfactory, unsystematic, traditional; and the profession is still in need of some rational method. Herein are such discourses as Dr. Cotting's useful; if, in themselves, they fail, perchance, to convince physicians, they nevertheless stimulate earnest, thoughtful study; they arouse original ideas; they serve to destroy the sense of dependence on traditional routine. The very reforms in medical treatment which we of to-day are wont to magnify as in such marked and gratifying contrast with the modes of our medical fathers, are the fruit of just such a radical and zealous spirit as that which characterizes the Address in question. With whatever reservations one may make as to the obvious difficulties in the way of carrying out the letter of the discourse, in the search for a more rational system of therapeutics, certain practical deductions may well be drawn. To "prove all things," and to hold fast what is proved; to administer

drugs in every instance with a distinct and direct end in view, not as a matter of empiricism, nor as a matter of routine, believing as little in the absolute efficacy of medicines as in their absolute inefficacy; to make the medicamenta always secondary in treatment, and to give the least consistent with the greatest good; these are some of the lessons which such a discourse suggests. The time of heroics and of specifics in treatment is passing; the time of fixed and systematic principles in therapeutics is yet to come, to be taught in medical schools and to be practised at the bedside. Every honest endeavor, however radical, to solve the problem is to be hailed as better than indifferent reliance on a venerable but unfruitful conservatism.

The Educational Standard of Harvard.—The following quotation from the address of President Eliot, at the Commencement Dinner at Harvard University last week, needs no comment:—

"The country stands in great need of better trained professional men. It is one of the crying evils of our American system, or rather lack of system, of education, that the common periods of professional study are absurdly short, and that our institutions of secondary education—our high schools and academies—do not systematically bring young men up to the professional schools and deliver them well fitted for professional study at the gates of these schools. The University means to persevere in the good work of raising the standard of its professional schools at whatever present sacrifice of numbers. The Harvard degrees will, therefore, have a serious meaning and a real value."

Vaccination as a Cure for Smallpox.—Dr. Grieve, of the Hampstead Smallpox Hospital, has put the curative power of vaccine lymph to the test in the way recommended by Mr. Furley, as alluded to in a recent number of the Journal, viz., by injecting large quantities under the skin. Seven cases were treated in this manner. The results were not at all satisfactory. Two men suffered severely from the local effects of the hypodermic injection of lymph, and the treatment employed did not produce the least ameliorating effect on the disease in any of the cases. One of them, in fact, died of malignant smallpox.

How Homœopathic Converts are Made. Prof. Henderson, of Edinburgh, avowedly one of the leaders of homœopathy in Scotland, and before his adoption of the new practice a physician to the Edinburgh Infirmary and a Professor in the University, owed his medical conversion, it is said, to a curious incident. The story is attributed to the late Sir James Simpson. Dr. Henderson had been induced by Abercrombie to investigate the subject of homœopathy, and he made certain researches which he mentioned in public as having struck him. Simpson, some time before that, had received from a well-known homœopathic chemist a case containing a set of phials filled with globules, which he had never used. These, he said, he should be glad to hand over to Henderson, and the latter with pleasure accepted them. He used them, and was so struck with their effects that he declared himself convinced of the truth of the homœopathic doctrines. Unfortunately, it turned out too late that he had unwittingly deceived himself; for the case with its phials had long been a plaything for Simpson's children, who used to empty out the little globules into heaps and fill the phials from these indiscriminately. It need hardly be said that this was not known to Simpson when he gave Henderson the case, but it became known to him afterwards and he made Henderson aware of it. But Henderson had gone too far to recede, even if he had desired to do so, and he became a declared practitioner of homœopathy.

It will be noticed by our readers that the present number of the Journal contains more than the usual amount of reading matter. It is our purpose to occasionally issue numbers which, like the present, by extra pages, shall relieve us of accumulated material and make room for fresh contributions, which are always welcome.

From Continental Journals.

Hypertrophy and Lengthening of the Femur and Tibia in a Case of Syphilis.—At a late meeting of the *Société Médicale des Hôpitaux*, M. Guibout exhibited a patient from one of the wards of *Saint Louis*, suffering from tertiary syphilitic ulcerations, whose right leg had undergone considerable lengthening. Both femur and tibia were found to share in this lengthening, which amounted to at least two-thirds of an inch. M Guibout remarked that hyperostoses are, as a rule, confined to a limited portion of a bone, but that in case of this patient, two entire bones exhibited throughout a well-marked hypertrophy, as manifested by their increased thickness as well as length, showing that, under the influence of a syphilitic diathesis as in case of scrofula, the process of nutrition and growth may be inordinately stimulated, inducing hypertrophy of the bones, without deformity.

M. Bergeron observed that he had seen an analogous hypertrophy of the bones of the leg in the case of a scrofulous patient. —*L'Union Médicale*, April 20, 1872.

Hydrate of Chloral.—The following résumé is taken from the third edition of the work on this drug by Prof. Oscar Liebreich.

The action of hydrate of chloral depends upon the formation of chloroform in the blood. When administered in appropriate doses, it produces, in the course of 10–20 minutes, a natural sleep, which comes on quietly, and lasts from four to ten hours. After awaking, the patient may continue in a drowsy state for several hours, but when this feeling has disappeared, no other unpleasant after-effect is experienced. On the contrary, one usually feels refreshed, as after an ordinary night's rest. The sleep produced, then, by this hypnotic, differs in no respect from the natural physiological sleep. If the sleeper is aroused, perfect consciousness is at once restored. The pupil of the eyes, which contracts during this sleep, is dilated again when the individual awakes, as in the case of normal sleep, but differing in this respect from the sleep produced by opium.

The circulation of the blood and the respiration are both retarded during the sleep induced by chloral, but not more so than in the case of ordinary sleep. Chloral interferes in no way with the process of digestion, tending rather to stimulate the appetite. In exceptional cases only is vomiting induced. The temperature of the body does not seem to be influenced by its use. Congestion of the brain, such as is sometimes produced by opium, has never been observed to follow the administration of chloral. The antispasmodic effect is produced only by comparatively large doses. As an anodyne, also, large doses are required. As a sure anæsthetic, too, it is effective only in very large doses, such as may be followed by serious results, so that it is not to be recommended for this purpose.

As will be inferred from the above, the administration of chloral is indicated in all cases of sleeplessness, whether attended by fever or not. It may be given advantageously in all cases of convulsions, especially those depending upon some lesion of the central nervous system, without regard to the acute or chronic character of the affection. As an anodyne in neuralgic affections, in the lancinating pain of cancer, and the like, its value is rather doubtful. In these cases, it seems to be more efficacious when administered in connection with morphine. Chloral, owing to its pungent, acrid taste, is contra-indicated in all affections involving the destruction of the mucous membrane of the primæ viæ. If given at all in this case, it should be in the form of an enema, or else largely diluted with water. It should not be given in arthritis. In typhoid fever, and in all diseases of the heart, it should be administered with great caution, and in very small doses. In hysteria, it seems to induce the convulsions accompanying this affection, and its use is therefore contra-indicated.—*All. Med. Cen. Zeitung*, March 23, 1872.

A NEW TREATMENT FOR PSORIASIS.—However much dermatologists may differ with regard to the appropriate treatment of psoriasis, upon one point they have thus far been pretty much of one mind, and that is, absolute impossibility of any radical cure of this most obstinate affection. Wilson warns his students that this is not a disease on which to build a medical reputation, and although he avers that the eruption may be made to disappear for the time being by the prolonged administration of arsenic, he admits that neither arsenic nor any other known medicine will prevent it from returning again, and generally within the same year. The treatment of the Vienna school of dermatologists, which consists more particularly in vigorous frictions with soft soap, and the external application of tar, carbolic acid, carbonate of potash, sulphur, &c., appears to be attended with more brilliant results, so that, in the wards of Prof. Hebra, these eruptions may be seen oftimes to melt away in the course of a few weeks. But here, too, the relapse is none the less certain. Hebra has openly confessed, in his Handbook, that of all the patients he has had under his care on account of this disease (and their number exceeds 1000), only a single instance has come under his notice in which the patient, having been once cured, did not suffer from a relapse. The treatment recommended by Dr. Buck, in a recent number* of the *Berliner Klin. Wochenschrift*, is said to be attended with much more favorable results than have been attained by any other remedies, inasmuch as the cure is rapid and a recurrence of the eruption rare. After a series of experiments with nitrate of silver, tincture of iodine and acetic acid, the conclusion was arrived at that the latter agent was the most rapid and radical in its effects.

The exact method of making this application is as follows:—First, the superficial scales are to be removed by the aid of frictions with soft soap and warm water, after which different portions of the diseased skin are to be attacked by the acetic acid, which is to be painted on by means of a small camel's-hair brush. The extent of skin which can be daily treated in this manner will depend very much upon the susceptibility of the patient to the action of the remedy, his ability and willingness to endure the consequent smarting, which would appear to be by no means inconsiderable. As the patient becomes more tolerant of this caustic, the applications may be made more frequently, and a larger area may be painted at one sitting. As the result of the application of this agent, the tissue becomes white and puffs out, while the surrounding skin becomes red and inflamed, all of which is attended by a moderately severe smarting, which usually subsides in the course of fifteen minutes. The layers of epidermis, which at first are rendered softer, soon dry up and assume the character of thin, horny scales, which in a few days either fall off of themselves or are readily detached, after which the application of the acid is to be renewed. If the smarting continues for any length of time, or if a severe irritation of the surrounding tissue is produced, as indicated by extensive swelling and redness, the treatment is to be suspended for the time being, and some soothing application (such as lead wash) is to be made to the irritated tissue. The acid may be applied in this manner from one to three times daily, as the patient may wish, until the red, indurated and thickened tissue is entirely removed, and its space supplied by a smooth, soft skin of the natural color. No eschar remains upon the affected spot. In cases of long standing, a dark-colored pigment may somewhat discolor the skin for a time, but even this disappears after a while, which, in cases where the psoriasis has had its seat upon the face, is a matter of no little importance to the sufferer. Upon the healthy tissue the acetic acid exerts little or no effect, acting merely as a rubefacient.

The time required for the accomplishment of a thorough cure varies from four to eight weeks, depending upon the degree of vigor and persistency with which the treatment is applied, and also upon whether the eruption is of long or short duration.

As a matter of fact, Dr. Buck has not found the pain and smarting any real objection to this mode of treatment, the small

* April 1, 1872.

amount of suffering being readily borne, and that the more cheerfully, when it becomes obvious that the beneficial effects are immediate and decided. One case is related of an affianced young lady, who was affected with an abundant eruption of psoriasis upon both arms, legs and back, which she was desirous of being freed from before the nuptial ceremony. An energetic treatment was begun, and continued with such effect that at the end of seven weeks the eruption had entirely disappeared; and now, after the expiration of six years, there has been no return of the disease.

Regarding psoriasis as a strictly local affection, Dr. Buck has invariably discarded the use of any internal remedies, such as arsenic, carbolic acid, &c., and the results of his external treatment above described seem to have been attended with uniform success. One case is reported of a young lady, æt. 30, whose body was almost entirely covered with diseased patches *(psoriasis universalis)*, varying in size from a split pea to the palm of the hand, whose cure was effected inside of eight weeks. In *psoriasis syphilitica*, which is not strictly included under the same head, the ordinary anti-syphilitic remedies are of course indicated. The acetic acid treatment appears to have been pretty thoroughly tested for a number of years by Dr. Buck, in his hospital wards, and he confidently recommends it to general practitioners, maintaining that it can be carried out *tuto*, if not both *cito et jucunde*. To those whose appetites have often succumbed in vain to nauseating doses of arsenic, so empirically prescribed by the English school of dermatologists, the announcement of this new and simple method of cure will be particularly gratifying.

Treatment of Intestinal Worms.—Mr. William Dale has given considerable attention to the various remedies proposed for the relief of these parasites, having resided in a locality where they were prevalent, and has arrived at the following conclusions:—

1. For tæniæ (tapeworms) he gives preference to the male shieldfern *(Aspidium felix mas)*. Turpentine, though pretty efficient, if given in an effectual dose, is apt to produce strangury. Kousso is difficult to obtain in an unadulterated form, and is uncertain in its action. Kameela is objectionable on account of the severe griping pains it induces. To prepare the patient for a dose of shieldfern, no food should be taken after breakfast, except mutton broth or tea. In the evening a dose of castor oil, or of compound senna mixture, is administered with the object of evacuating completely the contents of the intestine, so that the worm may be exposed to the full action of the vermifuge. Upon the following morning, the male fern is to be taken, in the dose of one drachm and a half of the liquid extract, rubbed up with half an ounce of mucilage; this mixture is then added to about two ounces of milk, which is the favorite food of the worm, and therefore the best vehicle for the administration of the medicine. The patient should lie quiet for two or three hours after taking the dose, otherwise it is apt to cause nausea and faintness. At the end of that time, another aperient dose may be required, since the male fern itself does not always purge. Nothing in the form of food is to be allowed until the bowels have been evacuated, with the exception, perhaps, of a little broth or tea, or brandy and water in case of faintness. This whole process should be repeated at the expiration of a week, though as a rule, the entire worm is killed and expelled by the first dose. In rare cases, three separate doses are necessary. The head is seldom found, owing, perhaps, to its small size, and possibly to the change it undergoes from maceration in the intestinal juices, so that the discovery of some of the smaller joints may be regarded as tolerably satisfactory evidence of the destruction of the worm.

2. For the round worm *(Ascaris lumbricoides) santonine* is recommended as a specific, and repeated small doses are advised, instead of a single full dose, since the latter is apt to produce some disagreeable symptoms, such as irregular pulse, singing in the ears, vertigo and nausea. A partial suppression of urine may follow the administration of even a small dose, but this is only temporary. The proper dose for a

child five years old is three or four grains every night at bedtime, which is to be taken with the following restrictions: A light meal of mutton-broth with very little bread may be allowed, but no food should be taken after this. The santonine must be taken in dry sugar or honey, and is more efficacious when no liquid is swallowed immediately after. As in the case of tapeworms, the vermifuge should be preceded by a brisk cathartic, such, for instance, as the mistura sennæ comp., which acts so efficiently upon the small intestine. The powder *(santonine)* should be taken every night for a fortnight, and as it is not itself aperient, it may be necessary occasionally to administer a cathartic.

3. The short thread worm *(Oxyuris vermicularis)* inhabits the lower portion of the intestine, and can generally be removed by enemata. Of these, a solution of common salt in an infusion of quassia (in the proportion of two ounces to a pint) is suggested as simple and efficacious. If this treatment fails in entirely dislodging them, they are probably resident higher up in the colon. It is then advisable to continue the injections, and at the same time administer by the mouth small doses of aloes in combination with iron and quinine. For children, wine of aloes with syrup of ginger may be ordered. If this treatment be continued for a fortnight or three weeks, the patient will rarely be further troubled with the annoyance.

THE PATHOLOGY AND TREATMENT OF SEA-SICKNESS.—The unfortunate victim of this most depressing malady, if he has retained the use of his intellectual faculties sufficiently to allow him to analyze his subjective symptoms, cannot fail to have observed that many causes contribute to induce and aggravate his sufferings.

Dr. Copeland has said that sea-sickness is the result of the depression of the semilunar, and allied ganglia, produced by the motion of the vessel. Dr. Chambers thinks that the principal cause is the relaxation of the œsophageal sphincter, while the majority of writers consider that the phenomena are mainly due to disorder of the central nervous system. Thus, Dr. Hooper regards sea-sickness as arising from a depressing effect on the brain, produced by the motion of the ship, and suggests as the only remedy lying perfectly still with the head low, by which an *increased* quantity of blood is thrown to the brain. Sir J. Alderson has recently maintained an opposite view to this, considering that the cause of this complaint is rather the increase of blood in the brain, due to the fact that when the body descends with the ship, the blood falls less quickly than its containing vessels, and so tends to produce pressure on the brain, these successive impulses causing vomiting. Dr. Alderson's theory is illustrated by an ingenious analogy drawn between the blood in its vessels, and the mercury in the tube of a barometer. Dr. Frederic Pollard, in a recent paper on this subject, maintains that this illustration of the barometer is an inaccurate one, affirming that if a barometer be allowed to fall, the glass and the mercury will begin to move under the action of gravity at precisely the same moment; and so far from the mercury having a tendency to lag behind, its greater specific gravity tends to make it fall more quickly than the tube, the result being that it carried the tube down at a greater rate than that at which the latter would fall if it were empty. While it may be imagined that the blood is actually jerked upward against the brain by successive blows of the sea on the ship, which would naturally cause a series of small concussions adding something to the mental and bodily distress, yet it is maintained by Dr. Pollard that this will not explain the occurrence of sea-sickness in ordinary cases, when the ship rises and falls without violent concussions. It is obvious, moreover, that merely assuming the recumbent posture would not, as has been asserted, prevent the unpleasant symptoms.

Dr. Pollard favors, therefore, the theory of Dr. Carpenter, Mr. Bain and others, who consider that the mental and bodily prostration arises from the continued action on the brain of a certain set of sensations, more particularly the sensation of a want of support. "This feeling, arising from the sudden loss of support, as when the footing or any prop that we lean upon sudden-

ly gives way, is one of the most disagreeable kind. Should the accident have been perilous to life, as when the foot slips close to the edge of a precipice or a rope cracks in Alpine climbing, a sickening feeling seizes the brain, the whole frame is agitated, and cold perspiration is felt all over." The phenomena of sea-sickness are therefore to be attributed to the constant repetition of this feeling of loss of support, consequent on the pitching and rolling of the ship, a feeling which resides essentially in the muscular system, although the effects on other senses contribute towards it. Thus, the sight of continually shifting lines and surfaces is an important matter; and on board steamer the constant vibration, the noise of the machinery, and evil smells of various kinds, are other items in the elements of causation.

As regards treatment, since sea-sickness arises from certain impressions on the senses, the obvious indication is to render these sensations as feeble as possible. Application of the mind to an engrossing book will keep it off for a short period, but the mind will speedily become alive to the sensations which force themselves on its attention. In order to lessen these sensations as much as possible, however, the patient should preserve the recumbent posture, as near the centre of the ship as possible; he should lie on a thickly padded couch, so as to diminish the vibration. Bad odors should be removed by efficient ventilation. The eyes should be shaded. As regards drugs, Dr. Pollard favors the administration of hydrate of chloral, as recommended by Dr. Döring, of Vienna, to be taken previous to the departure of the vessel, and to be repeated as often as necessary.—*The British Medical Journal*, June 8, 1872.

On the Presence of Bacteria in the Diphtheritic Form of Puerperal Fever.—Dr. Waldeyer has in four instances examined microscopically the diphtheritic deposit on the walls of the uterus, with reference to the presence of bacteria and vibriones; he has examined, moreover, in the same connection, the contents of the lymphatic vessels as well as the exudation occurring in peritonitis, pleuritis and pericarditis. In all these cases he has found numerous bacteria, in the diphtheritic patches, filling the space between the pus corpuscles and the fragments of gangrenous tissue; in other places the bacteria were mingled with the pus corpuscles, and contained within them. In the exudation of peritonitis these parasites were particularly numerous, abounding not only in the fluid, but within the pus corpuscles. As to their form, they were for the most part round, but in some instances cylindrical. While no great importance can be assigned to the presence of these bodies, Dr. Waldeyer considers that, where they occur in large numbers, the disease assumes a more severe type, as in the case of *nephritis bacterica* reported by Klebs and v. Recklinhausen.—*Arch. für Gynäkologie*, III., 293–297.

Remarkable Case of Extra-uterine Fœtation.—Dr. Metcalfe Johnson reports a case of extra-uterine fœtation, the remarkable feature of which is the length of time which elapsed between the conception and the escape of the fœtus—a period of forty-three or forty-four years. The health of the woman during this interval continued good, while the catamenial discharge was restored, and continued up to the age of 45.

According to her statement, when at the age of 26, being, as she believed, at the full period of pregnancy, she felt labor-pains coming on, and sent for the doctor. After the lapse of three days, a consultation was held, and a diagnosis of extra-uterine fœtation was pronounced. She then became very ill, and was confined to the bed for three months. After this she was removed to the seaside, but shortly returned home with no hope of improvement. Recovery, however, slowly took place, and in twelve months' time she was able to resume her employment as a washerwoman. The catamenia returned in about four months. The bone removed by Dr. Johnson was a perfect parietal bone. About three months previously, other bones had been discharged in this manner, while thirty years ago she also passed some small bones by the anus, which she was told by a midwife were fingers. The woman still exhibits a slight enlargement in the left iliac region, but is strong and healthy.—*Med. Times and Gazette*, June 8, 1872.

Medical Miscellany.

HARVARD MEDICAL SCHOOL; RESIGNATION.—Dr. R. M. Hodges has resigned his position as Adjunct Professor of Surgery and Clinical Surgery at the Medical School.

THE MEETING OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY which was to be held at Newport, July 18th, has been postponed till the third Thursday in July 1873; on account of the intended absence of many of the members for the purpose of attending the International Ophthalmological Congress in London on the 1st of August.

HONORS TO PROF. GROSS.—Prof. S. D. Gross has received the honorary degree of D.C.L. from the University of Oxford, England.

A NEW MEDICAL SCHOOL has been established at Wilmington, N. C., to meet "existing necessities for medical education" in that section.

KING WILLIAM III. of England was distinguished in his demeanor as dry, forbidding and austere" to no common degree. He never appeared quite at his ease except on the day of battle. For this coldness and reserve there might be, perhaps, in some degree a physical cause assigned, since, when his body was dissected in the presence of ten physicians and four surgeons (the most eminent of their time), it was reported by them that "it is very rare to find a body with so little blood in it as was seen in this."

THE BAKER BROWN FUND which is being contributed in England in behalf of the distinguished surgeon, on account of his pecuniary distress and incurable paralysis, now amounts to nearly £400.

BOOKS BOUND IN HUMAN SKIN.—A copy of the "Constitution of the French Republic of 1794," bound in human skin, is about to be sold in Paris. The binding, however, is said not to be unique. The public library in Bury St. Edmunds contains an octavo volume, consisting of a full report of the trial and execution of Corder (who murdered a young woman near London about forty years ago), together with an account of his life. This volume is bound in the murderer's skin, which was tanned for the purpose by a surgeon. The skeleton was prepared for the Suffolk General Hospital, and is still to be seen there. The human leather is darker and more mottled than vellum, of a rather coarse texture, with holes in it like those in a pig's skin, but smaller and more sparse. English books with this kind of binding are much less rare than is supposed. In the Bristol Law Library are several books bound in human skin, specially tanned for the purpose, and some curious details might be furnished of several local culprits executed in that city, who were flayed after execution to furnish the leather for binding together some contemporary legal lore.

DEATH FROM CHLOROFORM IN VIENNA.—The death of a patient while on the operating-table, under the influence of chloroform, occurred on the 27th of last month in the practice of the eminent Vienna surgeon Billroth. Disarticulation at the hip-joint was being performed, on account of osteomyelitis. The femoral artery had been tied, and Billroth was about to apply the galvano-caustic wire in order to divide the soft parts after the enucleation of the head of the bone, when the patient's breathing became stertorous, and he died. Tracheotomy was immediately performed; but it and all other attempts to restore life were fruitless.—*Brit. Med. Jour.*

THE Title-page and Index to the last volume of the JOURNAL, which was intended to be sent to subscribers in this week's issue, is unavoidably delayed another week.

CORRECTION.—In the case reported by Dr. Webber before the Boston Society of Medical Sciences, as presented in the last number of the JOURNAL (page 417), a statement that the case occurred in the service of Dr. Sinclair at the City Hospital was inadvertently omitted.

PAMPHLETS RECEIVED.—Fifty-first Annual Report of the Board of Direction of the Mercantile Library Association of the City of New York. Pp. 45.—A Plea for the Antiphlogistic Treatment of Disease. By Edward Montgomery, M.D., St. Louis, Mo. Pp. 20.

MARRIED.—In Paris, France, 6th ult., George Brune Shattuck, M.D., of Boston, to Amelia Dellavalle, daughter of Frederick Tchatte, Esq., of Paris.

Deaths in sixteen Cities and Towns of Massachusetts, for the week ending June 29, 1872.

Cities and Towns.	*No. of Deaths.*
Boston	126
Charlestown	7
Worcester	27
Lowell	14
Milford	3
Chelsea	3
Salem	16
Lawrence	7
Springfield	7
Lynn	11
Fitchburg	4
Taunton	5
Newburyport	5
Somerville	6
Haverhill	5
Holyoke	17
	263

Prevalent Diseases.	
Consumption	35
Cholera Infantum	25
Scarlet fever	14

Boston reports six deaths from smallpox. Holyoke reports nine deaths from measles.

GEORGE DERBY, M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, June 29th, 126. Males, 77; females, 49. Accident, 5—apoplexy, 1—anæmia, 1—asphyxia, 1—inflammation of the bowels, 2—disease of the bladder, 2—bronchitis, 4—inflammation of the brain, 2—congestion of the brain, 1—disease of the brain, 7—cerebro-spinal meningitis, 1—cyanosis, 2—cancer, 2—cholera infantum, 9—cholera morbus, 1—consumption, 16—convulsions, 5—croup, 2—diarrhœa, 4—dysentery, 3—diabetes, 1—erysipelas, 1—scarlet fever, 6—typhoid fever, 3—gangrene, 1—gastritis, 2—disease of heart, 8—hernia, 1—infantile, 2—intemperance, 1—disease of the kidneys, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 2—neglect, 1—ovariotomy, 1—paralysis, 1—premature birth, 2—puerperal disease, 1—syphilis, 2—smallpox, 6—spina bifida, 1—suicide, 2—whooping cough, 1—unknown, 3.

Under 5 years of age, 56—between 5 and 20 years, 11—between 20 and 40 years, 26—between 40 and 60 years, 22—above 60 years, 11. Born in the United States, 88—Ireland, 23—other places, 15.